

What is claimed is:

1. A mobile communication terminal for displaying a high resolution picture through a low resolution display unit, including a wireless transmitting/receiving unit for transmitting and receiving picture data through a mobile communication network, an input unit for receiving a command from the user, a display unit for outputting the picture, and a memory for storing the picture data,

the mobile communication terminal comprising a picture data processing unit for outputting a file format picture including a plurality of unit block picture data and indexes for access to each of the block picture data to the display unit,

wherein the picture data processing unit extracts minimum unit block picture data composing a partial picture which will be outputted to the display unit from the picture file by scrolling by using the index information of the picture file format, and outputs the picture.

2. The mobile communication terminal of claim 1, wherein the memory comprises a screen frame buffer for buffering the picture which will be outputted to the display unit, and a decoding frame buffer for buffering each unit block including the picture which will be outputted to the display unit, and

the picture data processing unit comprises:

a decoding block selecting unit for selecting the minimum unit block composing the partial picture which will be outputted to the display unit, and extracting the selected unit block picture data from the picture file by using the index information of the picture file format; and

a decoding frame generating unit for buffering the picture files of the extracted blocks in the decoding frame buffer, so that the picture included in the blocks buffered in

the decoding frame buffer and outputted to the display unit can be buffered in the screen frame buffer and displayed.

3. The mobile communication terminal of claim 1, wherein the picture data processing unit further comprises a selected block decompressing unit for decompressing each of the extracted unit block picture data.

4. The mobile communication terminal of claim 1, wherein the picture file format comprises picture header information including a size of the whole picture and a size of each unit block, and

the picture data processing unit further comprises a supplementary information display unit for extracting the picture header information of the picture file format from the picture file format, and displaying the information on the display unit.

5. The mobile communication terminal of claim 1, wherein the picture file format comprises supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, and

the picture data processing unit further comprises a supplementary information display unit for extracting the supplementary information of the picture file format from the picture file format, and displaying the information on the display unit.

6. The mobile communication terminal of claim 1, further comprising a format converting unit for converting the picture data from the wireless transmitting/receiving unit into a picture file format including a plurality of unit block picture data and indexes for access to each block picture data, and storing the picture file

format in the memory.

7. The mobile communication terminal of claim 6, wherein the format converting unit comprises:

5 a picture dividing unit for dividing the picture into the plurality of unit blocks; and
a storing unit for generating the indexes for each of the divided unit blocks, and storing the picture file format including the index information and each of the unit block data based on the index information in the memory.

10 8. The mobile communication terminal of claim 7, wherein the format converting unit further comprises a compressing unit for individually compressing each of the divided blocks, and the storing unit stores the compressed unit block data in the memory.

15 9. The mobile communication terminal of claim 7, wherein the format converting unit further comprises a decompressing unit for decompressing the compressed picture data from the wireless transmitting/receiving unit.

20 10. The mobile communication terminal of claim 7, wherein the storing unit generates a picture header including a size of the whole picture and a size of each unit block, and stores the picture header in the memory with each block data.

11. The mobile communication terminal of claim 7, wherein the storing unit generates supplementary information including at least one of a thumbnail of the picture,
25 location information of an initial display block and picture summary text information, and stores the information in the memory with each block data.

12. The mobile communication terminal of claim 6, further comprising an external input port for receiving picture data from an external device,

wherein the format converting unit converts the picture data from the external input port into a picture file format including a plurality of unit block picture data and indexes for access to each block picture data, and stores the picture file format in the memory.

13. The mobile communication terminal of claim 12, wherein the external device is a camera connected to the mobile communication terminal and the external input port.

14. A method for outputting a file format picture including a plurality of unit block picture data and indexes for access to each block picture data to a display unit in a mobile communication terminal, the mobile communication terminal comprising a wireless transmitting/receiving unit for transmitting and receiving the picture data through a mobile communication network, an input unit for receiving a command from the user, a display unit for outputting the picture, and a memory for storing the picture data,

the method for displaying a high resolution picture in the mobile communication terminal, comprising:

an initial picture output step for extracting minimum unit block picture data composing a partial picture which will be initially outputted to the display unit from the picture file by using the index information of the picture file format, and outputting the initial picture; and

a moved picture output step for extracting the corresponding unit block picture data from the picture file in the movement direction by using the index information of the

picture file format, and outputting the position-moved picture in accordance with generation of scroll action during the display of the picture.

15. The method of claim 14, wherein the picture file format comprises
5 picture header information including a size of the whole picture and a size of each unit block,

the method further comprising a step for extracting the picture header information of the picture file format from the picture file, and displaying the information on the display unit.

10 16. The method of claim 14, wherein the picture file format comprises supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information,

the method further comprising a step for extracting the supplementary information
15 of the picture file format from the picture file format, and displaying the information on the display unit.

17. The method of claim 14, wherein the memory comprises a screen frame buffer for buffering the picture which will be outputted to the display unit, and a decoding
20 frame buffer for buffering each unit block including the picture which will be outputted to the display unit, and

the initial picture output step comprises the steps of:

selecting the minimum unit blocks composing the partial picture which will be outputted to the display unit, and extracting the selected unit block picture data from the
25 picture file by using the index information of the picture file format;

buffering the picture data of the extracted blocks in the decoding frame buffer;

and

buffering the picture included in the blocks buffered in the decoding frame buffer and outputted to the display unit in the screen frame buffer and displaying the picture.

5 18. The method of claim 17, further comprising a step for decompressing each of the extracted unit block picture data after the step for extracting the unit block picture data and before the step for buffering the picture data of the extracted blocks in the decoding frame buffer.

10 19. The method of claim 14, wherein the memory comprises a screen frame buffer for buffering the picture which will be outputted to the display unit, and a decoding frame buffer for buffering each unit block including the picture which will be outputted to the display unit, and

the moved picture output step comprises the steps of:

15 calculating the movement position in accordance with generation of scroll action during the display of the picture;

re-selecting the minimum unit blocks composing the partial picture which will be outputted to the display unit in the movement direction, and deciding whether the selected unit block picture data exist in the decoding frame buffer; and

20 when the re-selected unit block picture data exist in the decoding frame buffer, buffering the contents of the decoding frame buffer in the corresponding position in the screen frame buffer, and displaying the picture.

20. The method of claim 19, comprising the steps of:

25 when the re-selected unit block picture data do not exist in the decoding frame buffer, prior to the step for displaying the picture, extracting block picture data from the

picture file in the corresponding direction by using the index information of the picture file format; and

buffering the picture file of the extracted blocks in the decoding frame buffer to correct the decoding frame buffer.

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21. The method of claim 20, further comprising a step for decompressing each of the extracted unit block picture data, after the step for extracting the selected unit block picture data and before the step for correcting the decoding frame buffer.

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22. The method of claim 14, further comprising a format converting step for dividing the picture data from the wireless transmitting/receiving unit into a plurality of unit blocks, converting the picture data into a picture file format including a plurality of unit block picture data and indexes for access to each block picture data, and storing the picture file format in the memory before the initial picture output step.

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23. The method of claim 22, wherein the format converting step comprises:

dividing the picture data from the wireless transmitting/receiving unit into a plurality of unit blocks;

generating indexes for each of the divided unit blocks; and

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generating a converted file according to the picture file format including the index information and each of the unit block picture data based on the index information.

24. The method of claim 23, further comprising a step for compressing each of the divided unit block picture data by blocks, after the step for dividing the picture data into the plurality of unit blocks.

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25. The method of claim 23, further comprising a step for generating a picture header including a size of the whole picture and a size of each unit block, after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file,

5 wherein the step for generating the converted file generates the converted file including the picture header.

26. The method of claim 23, further comprising a step for generating supplementary information including at least one of a thumbnail of the picture, location
10 information of an initial display block and picture summary text information, after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file,

wherein the step for generating the converted file generates the converted file including the supplementary information.

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27. A system for converting a picture file format, comprising a format converting server connected to a packet data service node and a picture providing server of a mobile communication system, for displaying the picture data format from the picture providing server in a mobile communication terminal, the mobile communication system
20 comprising a base transceiver system for performing wireless area communication with the mobile communication terminal, a base station controller for controlling the base transceiver system, a packet data service node connected to the base station controller for providing data services to the mobile communication terminal, and a picture providing server for providing picture data to the mobile communication terminal through the packet
25 data service node,

wherein the format converting server comprises:

a received file database for storing picture data from the mobile communication terminal or picture providing server, and a converted file database for storing a format-converted file of the picture data;

5 a picture data receiving unit for receiving the picture data from the mobile communication terminal or picture providing server;

a picture dividing unit for dividing the picture of the picture data into a plurality of unit blocks;

10 a storing unit for generating indexes of each of the divided unit blocks, generating a file converted into a picture file format including the picture data and indexes of each block, and storing the converted file in the converted file database; and

a converted file transmitting unit for transmitting the converted file to the mobile communication terminal or picture providing server.

28. The system of claim 27, wherein the storing unit generates a picture
15 header including a size of the whole picture and a size of each unit block, and stores a converted file including the picture header.

29. The system of claim 27, wherein the storing unit generates
20 supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, and stores a converted file including the supplementary information.

30. The system of claim 27, wherein the format converting server further
25 comprises a compressing unit for individually compressing each of the divided blocks, and the storing unit stores a converted file including the compressed unit block data in the converted file database.

31. The system of claim 27, wherein the format converting server further comprises a decompressing unit for decompressing the compressed picture data from the mobile communication terminal or picture providing server.

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32. A method for displaying a high resolution picture in a mobile communication terminal in a system for converting a picture file format comprising a format converting server, the format converting server being connected to a packet data service node and a picture providing server of a mobile communication system and
10 converting the format of the picture data, the mobile communication system comprising a base transceiver system for performing wireless area communication with the mobile communication terminal, a base station controller for controlling the base transceiver system, a packet data service node connected to the base station controller for providing data services to the mobile communication terminal, and a picture providing server for
15 providing picture data to the mobile communication terminal through the packet data service node, the method for displaying the high resolution picture in the mobile communication terminal, comprising:

dividing, at the format converting server, the picture data from the mobile communication terminal or picture providing server into a plurality of unit blocks;

20 generating indexes for access to each of the divided unit block picture data; and

generating a file converted into the picture file format including the index information and each of the unit block picture data based on the index information.

33. The method of claim 32, further comprising a step for compressing each
25 of the divided unit block picture data by blocks, after the step for dividing the picture data into the plurality of unit blocks.

34. The method of claim 32, further comprising a step for generating a picture header including a size of the whole picture and a size of each unit block, after the step for dividing the picture data into the plurality of unit blocks and before the step for
5 generating the converted file,

wherein the step for generating the converted file generates a converted file including the picture header.

35. The method of claim 32, further comprising a step for generating
10 supplementary information including at least one of a thumbnail of the picture, location information of an initial display block and picture summary text information, after the step for dividing the picture data into the plurality of unit blocks and before the step for generating the converted file,

wherein the step for generating the converted file generates a converted file
15 including the supplementary information.